

REMARKS

In view of the above amendments and the following remarks, reconsideration and further examination are requested.

By this amendment, claims 13-18 have been canceled and claims 19-27 have been added. Thus, claims 19-27 remain pending. Support for the new claim recitations can be found at least at: Fig. 62(b); column 48, lines 6-30; Fig. 179; Fig. 174; column 60, lines 3-5; column 59, lines 63-65. If the Examiner requires further supporting passages, she is invited to contact the undersigned by telephone.

In light of the Examiner's requirement, formal drawings for the present application are filed herewith.

Claims 13, 14, 16, and 17 were rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent No. 5,600,672 in view of Bryan et al. It is submitted that this rejection is improper. The present application is a reissue application of U.S. Patent No. 5,600,672. Further, the original patent was surrendered to the PTO on July 18, 2001 in the parent application of the present application. The Serial No. of the parent application is 09/244,037. Moreover, as is the case in the present application, in the parent application claim 1 of the original patent 5,600,672 has been canceled, and original claim 1 is not present in any of the currently pending reissue applications of U.S. Patent No. 5,600,672.

Claims 15 and 18 were rejected under the judicially-created doctrine of obviousness-type double patenting as being unpatentable over claims 2 and 5 of U.S. Patent No. 6,256,357. Claims 15-18 were provisionally rejected under the judicially-created doctrine of obviousness-type double patenting as being unpatentable over claims 13-18 of co-pending applications nos. 09/668,068, 09/672,947, 09/672,948, and 09/672,946. Claims 13-18 were also provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 13-18 of co-pending application no. 09/669,916 in view of Bryan. These rejections are traversed and are believed to be inapplicable to new claims 19-27.

Independent claims 19 and 20 include recitations of a transmission apparatus including a mapper operable to map a data stream to an n-level mapped signal, and a filter having a VSB

characteristic, which covers a frequency band including a carrier frequency, and a roll-off characteristic, which covers a frequency band not including the carrier frequency, and being operable to filter the n-level mapped signal to produce a VSB modulated signal. Independent method claims 25 and 26 include recitations of a transmission method including mapping a data stream to an n-level mapped signal, and filtering the n-level mapped signal with a filter having a VSB characteristic, which covers a frequency band including a carrier frequency, and a roll-off characteristic, which covers a frequency band not including the carrier frequency, to produce a VSB modulated signal.

Independent claim 21 includes recitations of a signal receiving apparatus including a receiver operable to receive a transmitted VSB modulated signal having information of a data stream, wherein the transmitted VSB modulated signal includes a VSB modulated signal, a filter having a VSB characteristic, which covers a frequency band including a carrier frequency, and a roll-off characteristic, which covers a frequency band not including the carrier frequency, the filter being operable to filter the VSB modulated signal to an n-level mapped signal, and a demapper operable to demap the n-level mapped signal to the data stream. Independent method claim 27 includes recitations to a signal receiving method including receiving a transmitted VSB modulated signal having information of a data stream, wherein the transmitted VSB modulated signal includes a VSB modulated signal, filtering the n-level VSB modulated signal with a filter having a VSB characteristic, which covers a frequency band including a carrier frequency, and a roll-off characteristic, which covers a frequency band not including the carrier frequency, to produce an n-level mapped signal, and demapping the n-level mapped signal to the data stream.

None of the applied commonly owned applications or patent claims a filter having a VSB characteristic, which covers a frequency band including a carrier frequency, and a roll-off characteristic, which covers a frequency band not including the carrier frequency, or such a filter being operable to filter an n-level mapped signal to produce a VSB modulated signal as recited in claims 19 and 20 of the present application. Moreover, none of the applied commonly owned applications or patent claims such a filter being operable to filter a VSB modulated signal to produce an n-level mapped signal as recited in claim 21 of the present application. Further, none of the applied commonly owned applications or patent claims a method including filtering an n-level mapped

signal with such a filter to produce a VSB modulated signal as recited in claims 25 and 26, or filtering a VSB modulated signal with such a filter to produce an n-level mapped signal as recited in claim 27. Also, none of the prior art of record discloses these claimed features.

Because of the recitations discussed above, claims 19-27 are not anticipated by any of the prior art of record. Also because of the recitations discussed above, it would not have been obvious to a person having ordinary skill in the art at the time the present invention was made to modify or combine any of the prior art of record, or any of the claimed inventions of the applied commonly owned applications and patent, in such a manner as to result in or otherwise render obvious the inventions recited in claims 19-27 of the present application. Therefore, it is submitted that claims 19-27 are allowable.

In view of the above amendments and remarks, it is submitted that the present application is in condition for allowance. The Examiner is invited to contact the undersigned attorney by telephone to resolve any remaining issues.

Respectfully submitted,

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